

# ON THE OCCURRENCE IN AUSTRALIA OF ACARINA OF THE FAMILY TENERIFFIIDAE (TROMBIDOIDEA)

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Fig. 1-2.

The family *Teneriffidae* was erected in 1911 by Dr. Sig Thor (Zool. Anz. 38, 171-179) for two new genera, each with a single species. *Teneriffia quadripapillata* was described from Tenerife and *Parateneriffia bipectinata* from Paraguay. A translation of Sig Thor's description of the family is as follows:

"Body elongate with running legs. Cuticle weak with striations; without erista or chitinized plates. Front forwardly produced, with three pairs of setae. Two widely separated pairs of eyes. Anus at end of body visible from above and below.

"The long genital opening of sickle-shaped valves with few hairs. No (either inner or outer) genital discs present. Legs simple, with setae; the two claws, at least on the four front legs, with double combs; hind legs sometimes with a third 'intermediate' claw. Mouth-parts: rostrum short and broad; the distal end of the labium on the under side with four short stumpy papillae and two pairs of setae; mandible two-segmented, claw-like, with two small setae on the dorsal side.

"Palpi five-segmented, thick, strong, and curved, with long terminal claw and few setae. On the inner side of segment IV and behind the terminal claw are two chitinized papillae; segment V (thumb) quite rudimentary but with many (6-7) long setae."

In 1924 (Proc. Zool. Soc. London, p. 1078) Hirst erected the genus *Neoteneriffiola* for the species *N. luxoriensis* Hirst from Egypt, and in the following year (loc. cit. p. 1278) he erected the genus *Heteroteneriffia* for a marine species, *H. marina* Hirst from the Federated Malay States.

Amongst the collection of Acarina made by Hirst while in Australia in 1927-28, and later presented to the South Australian Museum by Prof. T. H. Johnston to whom they had been left, was a single preparation of five specimens which had been provisionally labelled by Hirst as belonging to the genus *Neoteneriffiola*.

I have now been able to study these specimens as well as two others belonging to this family which have recently come to hand. As a result of this work it is now clear that Hirst's provisional generic determination is incorrect and that his specimens will require a new genus. For this I propose the name *Austroteneriffia*,

and for the species the name of *hirsti* after the late Mr. Stanley Hirst, one of the few English Acarologists.

The other two specimens are even more interesting, and while requiring still another genus, are so strikingly different from all other known species of *Teneriffiidae* as to justify the splitting up of the family into two very distinct subfamilies, the *Teneriffinae* and the *Rhaginae*. The first subfamily is defined by the elliptical form, no cephalothoracic separation from the abdomen, the paired eyes on each side being adjacent, and the claws of one or both of the front pairs of legs being strongly pectinate. To this family belong all previous known genera as well as the new genus *Austroteneriffia*. The *Rhaginae* is represented by the new genus and species *Rhagina protea*, and can be defined as not having an elliptical form, with narrow elongate cephalothorax well separated from the much wider abdomen, with the eyes on each side widely separated, claws all small, indistinct, and without pectinations.

#### FAMILY TENERIFFIIDAE Sig Thor 1911.

##### Subfamily Teneriffinae subfamily nov.

*Definition:* Body form elliptical. Cephalothorax not separated from abdomen. Eyes adjacent. Claws large and distinctly pectinated, at least on legs I or I and II. Genital discs absent or present.

##### Genus AUSTROTENERIFFIA gen. nov.

*Description:* Body form elliptical without any marked separation of cephalothorax from abdomen. Eyes, a pair on each side, adjacent. Claws of legs I and II large and strongly bipectinate, III and IV small and only indistinctly pectinated, the teeth being short. Anterior edge of coxae without a distinct row of setae, only 2-3 present. Genital discs present, three pairs.

*Genotype:* *Austroteneriffia hirsti* sp. nov.

*Remarks:* This new genus is most closely related to *Heteroteneriffia* Hirst in that it possesses genital discs. Sig Thor in his description of the genera *Teneriffia* distinctly states that no genital discs are present, but in Hirst's descriptions of *Neoteneriffiota* and *Heteroteneriffia* no mention of the presence or absence of these is made. However, in the figure of the ventral surface of *Heteroteneriffia marina* Hirst, the presence of at least two pairs are distinctly indicated. From *Heteroteneriffia* the new genus differs in having the claws of both legs I and II strongly pectinated (on legs I only in *Heteroteneriffia*) and in not having a definite row of setae on the anterior margins of the coxae.

## AUSTROTENERIFFIA HIRSTI sp. nov.

*Description:* Length idiosoma  $866\mu$ , gnathosoma  $300\mu$ , opisthosoma  $415\mu$ . Palpi  $300\mu$ , segment II very much enlarged,  $133\mu$  wide. Mandibles  $250\mu$  long. Cephalothorax not differentiated from abdomen, although there is a fold running across between the eyes; with three pairs of setae and a pair of fine sensory hairs,  $66\mu$  long, arising from rosettes. Eyes, a pair on each side, adjacent. Palp II

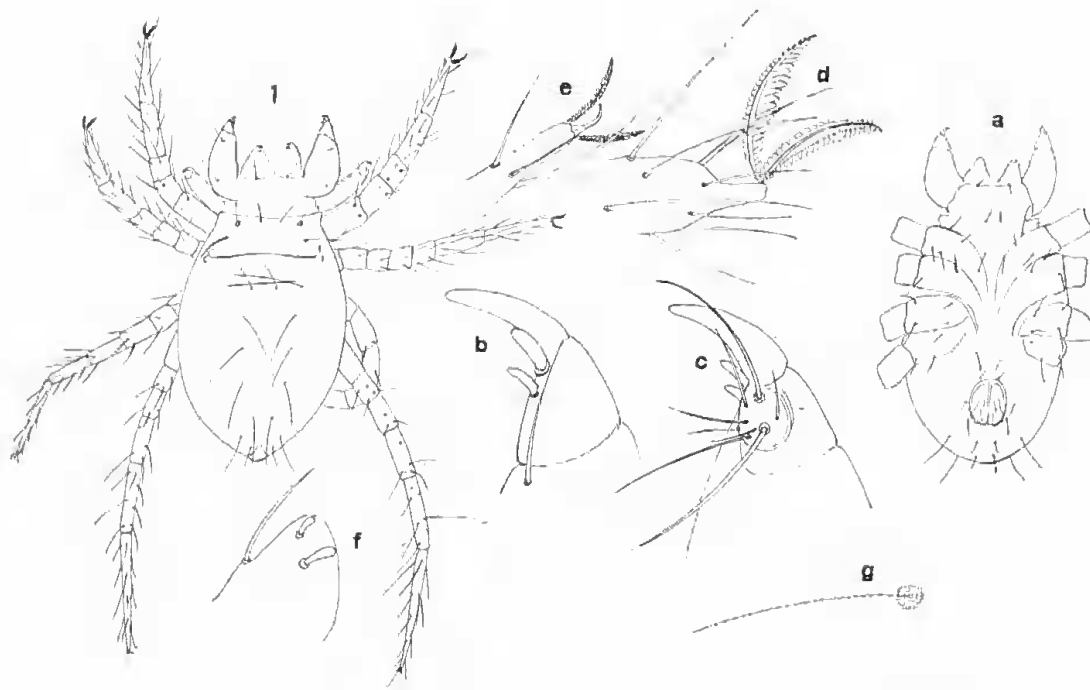


Fig. 1. *Austroteneriffia hirsti* sp. nov.: 1, dorsal view of entire animal, mandibles somewhat displaced; a, ventral view of same; b, apex of palp from above; c, same from below; d, tip of tarsus and claws of leg I; e, same of leg III; f, half of apex of labium from below; g, cephalothoracic sensory hair.

with two dorsal setae, III without a process, tibia with large terminal and two accessory claws, tarsus rudimentary as in the family and with the usual setae. Legs, I  $1000\mu$  long, tarsus with a pair of long ( $83\mu$ ) bipectinate claws; II  $1000\mu$ , claws  $66\mu$  long, bipectinate; III  $1083\mu$  long, claws  $40\mu$  long, only indistinctly pectinated and short-toothed, a third median simple and shorter claw present; IV  $1298\mu$  long, claws  $33\mu$  long, otherwise as in III. Abdomen with rather long, stout, slightly ciliated setae, the outer setae of the row of four immediately behind the eyes are  $280\mu$  long, the others somewhat shorter. Dorsal surface finely striated, the striations somewhat stronger on the shoulders and wanting in the middle of the cephalothorax, there perhaps indicating a dorsal plate. Coxae in two groups, not widely separated by a narrow strip of striated cuticle, with comparatively

few setae, these not forming a distinct row along the anterior coxal margins. Coxae I and II narrowly separated along the medial line, III and IV more widely so. Genital opening large, about two-thirds as long as the distance separating it from the posterior coxae; with three pairs of discs. Anus large, terminal and visible both dorsally and ventrally. Colour probably reddish-purple.

*Locality:* Type and four paratypes (on one slide) taken by Hirst at Menindie, South Australia, in July, 1928.

*Remarks:* This species is very well differentiated from all others by the generic characters. The fine sensory hairs arising from rosettes have only been observed in *Heteroteneriffa marina* Hirst. Apparently they do not occur in other than these two species.

### Subfamily Rhaginae subfamily nov.

*Definition:* Body form characteristic with narrow elongate, parallel-sided cephalothorax well separated from the broader abdomen. Eyes, two on each side, widely separated. Claws small and indistinct, simple. Genital discs absent. Anus entirely dorsal and subterminal.

#### Genus RHAGINA gen. nov.

*Description:* As for the subfamily.

*Genotype:* *Rhagina protea* sp. nov.

#### RHAGINA PROTEA sp. nov.

*Description:* Length idiosoma 533 $\mu$ , gnathosoma 187 $\mu$ , opisthosoma, 143 $\mu$ . Palpi long, 187 $\mu$ , segment II much broadened, with one dorsal seta, III short, without process, tibia with apical claw and two small stumpy accessory claws, tarsus rudimentary as in the family and with the usual setae. Mandibles as figured. Legs: I 525 $\mu$  long, antennaeform, with long slender praetarsus and small indistinct claws, apically with long setae; II 257 $\mu$  long, stouter; III 345 $\mu$ ; IV 440 $\mu$ ; all claws small and without combs; III and IV without the third median claw. Cephalothorax elongated, straight-sided, 170 $\mu$  long by 143 $\mu$  wide, with three pairs of strong setae; eyes two on each side, widely separated, the front pair being situated at the anterior corners of the cephalothorax, the posterior pair midway down the lateral margins. Abdomen anteriorly broad, 257 $\mu$ , with well developed shoulders, each with a seta 110 $\mu$  long; from the shoulders the abdomen tapers towards the apex. The dorsal setae are short (34 $\mu$ ) stout, simple, and disposed as figured. The anus is entirely dorsal, on each side with a pair of long setae (100 $\mu$ ). Ventral surface: the coxae in two widely-separated groups, those of

legs I and II large, practically touching in the medial line and with few short setae; III and IV widely separated in middle line and basally indistinct. Genital opening long and narrow as figured.

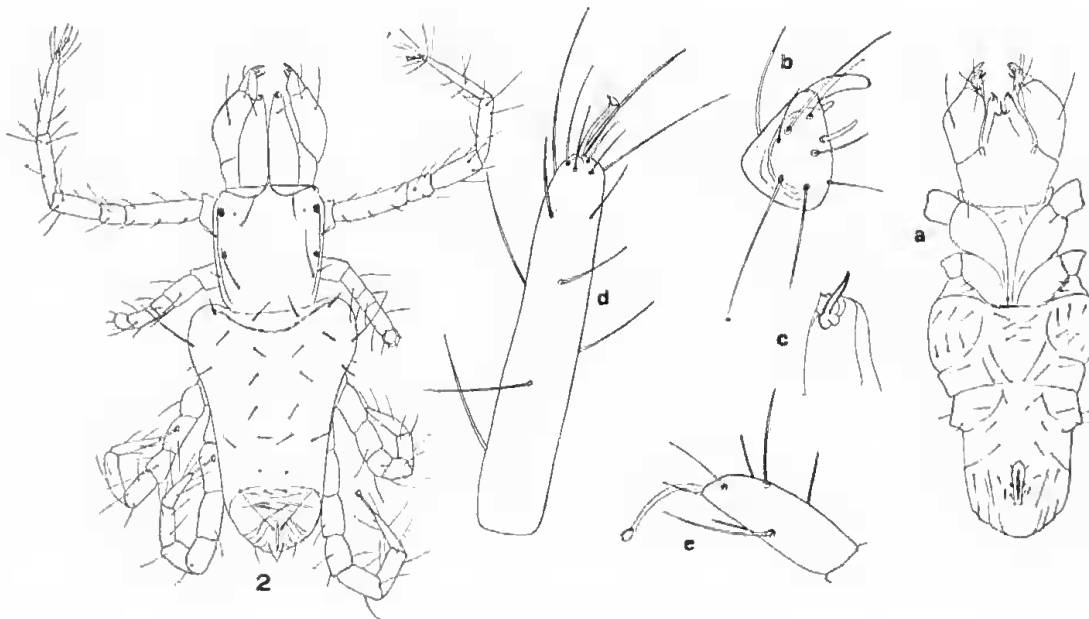


Fig. 2. *Rhagina protea* sp. nov.: 2, dorsal view of entire animal; a, ventral view of same without legs; b, apex of palp from below; c, tip of mandible; d, tarsus of leg I; e, tarsus of leg III.

*Locality:* Type from moss from Glen Osmond, South Australia, Apr./35 (R.V.S.); a second specimen from moss from Myponga, South Australia, Apr./35 (R.V.S.).

*Remarks:* Superficially this species suggests the form of the Rhagidiidae.

KEY TO THE GENERA AND SPECIES OF TENERIFFIIDAE.

1. Body form elongate-oval. Cephalothorax not separated from abdomen. Eyes adjacent. Claws large, pectinate on legs I, or I and II. Genital discs present or absent . . . . . 2.  
 Subfamily *Teneriffinae* nov.
- Body form not so. Cephalothorax much narrower than the broader abdomen and separated therefrom. Eyes widely separated. Claws small and simple, not pectinate. Legs I antennaeform . . . . . Subfamily *Rhaginae* nov.  
 Genus *Rhagina* nov.  
*protea* sp. nov. Australia.
2. Genital discs absent . . . . . 4.  
 Genital discs present. Palp III without process . . . . . 3.
3. Only claws of legs I large and strongly pectinate. Anterior edge of coxae with a distinct row of 5-6 setae. Marine Genus *Heteroteneriffia* Hirst, 1925.  
*marina* Hirst 1925, Fed. Malay St.

Claws of legs I and II large and strongly pectinate. Anterior edge of coxae without distinct row of setae, with only 2-3 irregularly placed ones.

Genus *Austroteneriffia* nov.

*hirsti* sp. nov. Australia.

4. Palp III with appendage. . . . . 5.  
 Palp III without appendage. Claws of legs I and II large, strongly pectinate.  
 Coxae with row of setae on anterior margins.

Genus *Teneriffia* Sig Thor 1911.

*quadripapillata* Sig Thor 1911 Teneriffe.

5. Coxae I and II touching in medial line, anterior edge of coxae III with a row of 6 strong setae. Genital opening large. Claws on leg I only pectinated.

Genus *Parateneriffia* Sig Thor 1911.

*bipectinata* Sig Thor 1911, Paraguay.

Coxae I and II separated in medial line, anterior edge of coxae III with only 3 setae. Genital opening smaller. Claws of leg I only pectinated.

Genus *Neoteneriffiola* Hirst 1924.

*luxoriensis* Hirst 1924, Egypt.